

CLAIMS LISTING

The present state of the claims 1-15 pending herein, including the instant amendment of claims 1, 2, 5, 6, 7, 8, 9, 13 and 15, is as set forth below. The listing of the pending claims supercedes any previous listings. No new matter has been added.

1. (Currently Amended) A trigger generator for supplying a trigger signal to a medical device, the trigger generator comprising:

a respiratory signal device associated with athe subject that generates a respiratory signal representing the flow of gas into and out of the subject's lungs during the subject's breathing cycle; and

wherein said a-trigger generator includes an integrator that integrates the respiratory signal-to form an integrated respiratory signal, and generates thea trigger signal when the integrated respiratory signal has a value representing a selected point in the subject's breathing cycle.

2. (Currently Amended) The trigger generator of claim 1, wherein said the-trigger generator further comprises:

~~—an integrator that integrates the respiratory signal and generates a corresponding integrated respiratory signal; and~~

~~—a trigger level detector that compares the integrated respiratory signal with a trigger level and generates the trigger signal when the integrated respiratory signal equals the trigger level.~~

3. (Original) The trigger generator of claim 2, wherein the trigger level detector further comprises:

a trigger level source for generating the trigger level representing the selected point in the subject's breathing cycle.

4. (Original) A method for triggering operation of a medical system at a selected point in a subject's breathing cycle, the method comprising the steps of:

receiving a respiratory signal representing the flow of gas into and out of the subject's lungs during the subject's breathing cycle;

integrating the respiratory signal to create an integrated respiratory signal; and

triggering the medical device when the integrated respiratory signal has a value corresponding to a selected point in the subject's breathing cycle.

5. (Currently Amended) The method of claim 4, wherein the steps of triggering the medical device comprises the steps of:

receiving the integrated respiratory signal;

receiving a trigger level representing a value corresponding to the selected point in the subject's breathing cycle ~~as described by an integrated signal~~;

comparing the integrated respiratory signal and the trigger level; and

generating the trigger signal when the integrated respiratory signal corresponds to the trigger value.

6. (Currently Amended) The method of claim 5, wherein the steps of comparing further includes ~~the integrated respiratory signal and the trigger level signal~~ comprises the step of setting a value to be represented by the trigger value.

7. (Currently Amended) A trigger generator for supplying a trigger signaling to a medical device, the trigger generator comprising:

respiratory signal means associated with a ~~the~~ subject for

generating a respiratory signal representing the flow of gas into and out of the subject's lungs during the subject's breathing cycle, and integrating the respiratory signal to generate an integrated respiratory signal; and

trigger generator means for integrating the respiratory signal and generating thea trigger signal when the integrated respiratory signal has a value representing a selected point in the subject's breathing cycle.

8. (Currently Amended) A medical data acquisition system comprising:

a medical data system that acquires a set of data from a subject based on a trigger signal;

a respiratory signal device associated with the subject that generates a respiratory signal representing the flow of gas into and out of the subject's lungs during the subject's breathing cycle; and

a trigger generator that integrates the respiratory signal to generate an integrated respiratory signal and generates the trigger signal when the integrated respiratory signal has a value representing a selected point in the subject's breathing cycle.

9. (Currently Amended) The medical acquisition system, as set forth in claim 8, wherein the value representing thea selected point in the subject's breathing cycle is selected to correspond to a point in the cycle where ~~the~~ motion of the lungs is at a minimum.

10. (Original) The medical data acquisition system, as set forth in claim 8, wherein the medical data system is an ultrasound system.

11. (Original) The medical data acquisition system, as set forth in claim 8, wherein the medical data system is a tomographic system.

12. (Original) The medical data acquisition system, as set forth in claim 8, wherein the medical data system is a MRI system.

13. (Currently Amended) The medical data acquisition system, as set forth in claim 8, wherein the respiratory signal device outputs a digital value and the trigger generator comprises a processor configured to integrate the digital value to generate an integrated digital value~~respiratory signal~~ and utilize the integrated digital value to generate and~~cause the output of the trigger signal.~~

14. (Original) A trigger generator for supplying a trigger signal to a medical device based on a respiratory signal representing the flow of gas into and out of the subject's lungs during the subject's breathing cycle, the trigger generator comprising:

- an integrator that integrates the respiratory signal and generates a corresponding integrated respiratory signal;

- a trigger level source that outputs a trigger level representing the selected point in the subject's breathing cycle; and

- a trigger level detector that compares the integrated respiratory signal and the trigger level and generates the trigger signal when the integrated respiratory signal enters into a predetermined relationship with the trigger level.

15. (Currently Amended) A trigger generator for supplying a trigger signal to a medical device, the trigger generator comprising:

- a respiratory signal device associated with the subject that generates a respiratory signal representing the flow of gas into and out of the subject's lungs during the subject's breathing cycle; and

a trigger generator that calculates a differential of the respiratory signal and generates thea trigger signal when the differential of the respiratory signal has a value representing a selected point in the subject's breathing cycle.